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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,292	01/10/2006	Kui Yong Lim	DE 030244	6997

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EXAMINER	
BAISA, JOSELITO SASIS	

ART UNIT	PAPER NUMBER
2832	

NOTIFICATION DATE	DELIVERY MODE
05/13/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No.	Applicant(s)	
	10/564,292	LIM ET AL.	
	Examiner	Art Unit	
	JOSELITO BAISA	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-14,18 and 20-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-14,18 and 20-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 24 March 2010 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5-14, 18 and 20-26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Knutson et al. [4035695] in view of Takahira [5424527].

Regarding claims 1, 8, 9, 11-14 and 21-26, Knutson discloses an inductive system comprising a first part in the form of a printed coil 52 (a loop) on substrate (pc) 10; and a second part in the form of a non-printed coil 46 (see figure 2); the non-printed coil 46 comprises an air coil comprising a further number of turns defined by at least one wire diameter and at least one coil diameter; wherein the printed coil represented by loop 52 and the non-printed coil 46 are coupled serially; the coil (26, 28, 30) is on an outer layer of a printed circuit board (40, 10); and wherein the total inductance of the inductive-system is substantially equal to an inductance of the

printed coil plus an inductance of the air coil [Col. 2, Lines 45-48, Figure 1] and [Col. 3, Lines 28-38, Figure 2].

Knutson discloses the instant claimed invention discussed above except for the printed coil is spiral loop; and wherein a mutual inductance which is also based on a direction of said printed coil, a direction of said air coil and a length of said air coil; and wherein the mutual inductance increases with length of the air coil until a maximum overlapping area between the printed coil and the air coil has been reached.

However, Knutson discloses that the loop 52 (coil 52) with bridges 53, 54 is similar to the spiral coil of Figure 1 that has the first turn 26 and second turn 28 which includes loop 30 having plurality of bridges 32; and combining the air coil 46 of Figure 2 to the spiral coil of Figure 1 between the distance of terminal 26 and pad 24 (which determines the length of air coil, as in claim 23) would have resulted in an overlapping area between spiral coil of Fig. 1 and the air coil 46, as in claim 25[Col. 2, Lines 45-54, Figures 1 and 2].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the spiral coil as taught by Knutson in Figure 1 to the inductive loop shown in Figure 2.

The motivation would have been to expand variation in inductance value of the inductive system [Col. 2, Lines 61-67, Figures 1 and 2].

Takahira discloses a mutual inductance of an inductive-system substantially equal to an inductance of coil 51a plus an inductance of the coil 51b which is based on winding direction, size and shape (length or diameter) of coil which depends on number of turns and pitch of the coil [Col. 4, Lines 44-50, Figure 1].

It would have been obvious to one having ordinary skill in the art at the time of the invention to apply the coil relation as taught by Takahira to the coil of Knutson.

The motivation would have been to be able to produce a mutual inductance that is based on winding directions, size and shape for certain device application [Col. 5, Lines 30-50].

With respect to claim 10, the claims are method counterpart of structure of claim 1 and method steps therefore are inherent for manufacturing an inductive system comprising a first part in the form of a printed coil and a second part in the form of a non-printed coil.

Regarding claim 5, Knutson discloses the number of turns (26, 28) are further defined by a diameter of a center path and a turning direction, with the further number of turns (26, 28) being further defined by a turning orientation [Col. 2, Lines 45-50, Figure 1].

Regarding claim 6, Knutson discloses one end of the non- printed coil 46 is coupled (in place of jumper 22) to a center end of the coil (26, 28, 30), with the other end of the non-printed coil 46 and an outer end of the coil (26, 28, 30) constituting ends of the inductive-system [Col. 3, Lines 28-38, Figures 1 and 2].

Regarding claim 7, Knutson discloses the coil (26, 28, 30) is on an outer layer of a printed circuit board (40, 10) [Col. 3, Lines 28-38, Figures 1 and 2].

Regarding claims 18 and 20, Takahira discloses the number of turns is further defined by a diameter of a center path and the turning direction of the printed coil [Col. 4, Lines 44-50, Figure 1].

Response to Argument

Applicant's arguments with respect to claims 1, 5-14, 16, 18 and 20-26 have been considered but are moot in view of a new ground of rejection.

Knutson discloses an inductive system comprising a first part in the form of a **printed coil** 52 (a loop); and a second part in the form of a **non-printed coil** 46 (see figure 2). The coils are serially connected, wherein the total inductance of the inductive-system is substantially equal to an inductance of the printed coil plus an inductance of the non-printed coil.

Knutson discloses that the loop 52 (coil 52) with bridges 53, 54 is similar to the spiral coil of Figure 1 that has the first turn 26 and second turn 28 which includes loop 30 having plurality of bridges 32; and combining the air coil 46 of Figure 2 to the spiral coil of Figure 1 through terminal 26 and pad 24 would have resulted in an overlapping area between spiral coil of Fig. 1 and the air coil 46 of Figure 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joselito Baisa whose telephone number is (571) 272-7132. The examiner can normally be reached on M-F 5:30 am to 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elvin G Enad/
Supervisory Patent Examiner, Art Unit 2832

Joselito Baisa
Examiner
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/J. B./
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